



Centers for Disease Control and Prevention

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Misconceptions about Seasonal Flu and Flu Vaccines

Questions & Answers

The information on this page also is available in a [video featuring CDC's Dr. Joe Bresee](http://flu/freeresources/video/misconceptions-flu-vaccine.htm) ([/flu/freeresources/video/misconceptions-flu-vaccine.htm](http://flu/freeresources/video/misconceptions-flu-vaccine.htm)).

Misconceptions about Flu Vaccines

Can a flu shot give you the flu?

No, a flu shot cannot cause flu illness. Flu vaccines that are administered with a needle are currently made in two ways: the vaccine is made either with a) flu vaccine viruses that have been 'inactivated' and are therefore not infectious, or b) with no flu vaccine viruses at all (which is the case for recombinant influenza vaccine). The most common side effects from the influenza shot are soreness, redness, tenderness or swelling where the shot was given. Low-grade fever, headache and muscle aches also may occur.

In randomized, blinded studies, where some people get inactivated flu shots and others get salt-water shots, the only differences in symptoms was increased soreness in the arm and redness at the injection site among people who got the flu shot. There were no differences in terms of body aches, fever, cough, runny nose or sore throat.

- Carolyn Bridges et al. (2000). [Effectiveness and cost-benefit of influenza vaccination of healthy working adults: A randomized controlled trial](http://jama.jamanetwork.com/article.aspx?articleid=193139) (<http://jama.jamanetwork.com/article.aspx?articleid=193139>) (<http://www.cdc.gov/Other/disclaimer.html>).
- Kristin Nichol et al. (1995). [The effectiveness of vaccination against influenza in healthy working adults](http://www.nejm.org/doi/full/10.1056/NEJM199510053331401) (<http://www.nejm.org/doi/full/10.1056/NEJM199510053331401>) (<http://www.cdc.gov/Other/disclaimer.html>). New England Journal of Medicine. 333(14): 889-893.

Can the nasal spray flu vaccine give you the flu?

The nasal spray vaccine cannot give you the flu. The viruses contained in the nasal spray flu vaccine are attenuated (i.e., weakened), which means they cannot cause flu illness. These weakened viruses are also cold-adapted, meaning they are designed to only cause mild infection at the cooler temperatures found within the nose. These viruses cannot infect the lungs or other areas of the body where warmer temperatures exist. The nasal spray is well tolerated and the most commonly reported side effects are mild and include runny nose, nasal congestion and cough.

Are any of the available flu vaccines recommended over the others?

CDC does not have a preference for which of the available flu vaccine options people should get this season. This includes deciding between trivalent vaccine (protects against three flu viruses) or [quadrivalent](http://flu/protect/vaccine/quadrivalent.htm) ([/flu/protect/vaccine/quadrivalent.htm](http://flu/protect/vaccine/quadrivalent.htm)) vaccine (protects against four flu viruses) or between injection (the flu shot) or nasal spray vaccine. All are acceptable options, but some vaccines are intended for specific age groups. Talk to your doctor or nurse about the best options for you and your loved ones. The important thing is to get a flu vaccine every year.

Is it better to get the flu than the flu vaccine?

No. Flu can be a serious disease, particularly among young children, older adults, and people with certain chronic health conditions, such as asthma, heart disease or diabetes. Any flu infection can carry a risk of serious complications, hospitalization or death, even among otherwise healthy children and adults. Therefore, getting vaccinated is a safer choice than risking illness to obtain immune protection.

Do I really need a flu vaccine every year?

Yes. CDC recommends a yearly flu vaccine for just about everyone 6 months and older, even when the viruses the vaccine protects against have not changed from the previous season. The reason for this is that a person's immune protection from vaccination declines over time, so an annual vaccination is needed to get the "optimal" or best protection against the flu.

Why do some people not feel well after getting the seasonal flu vaccine?

Some people report having mild reactions to flu vaccination. Common reactions to the flu shot and the nasal spray flu vaccine are described below.

Reactions to the flu shot:

The most common reaction to the flu shot in adults has been soreness, redness or swelling at the spot where the shot was given. This usually lasts less than two days. This initial soreness is most likely the result of the body's early immune response reacting to a foreign substance entering the body. Other reactions following the flu shot are usually mild and can include a low grade fever and aches. If these reactions occur, they usually begin soon after the shot and last 1-2 days. The most common reactions people have to flu vaccine are considerably less severe than the symptoms caused by actual flu illness.

Reactions to nasal spray flu vaccine:

People also may have mild reactions to the nasal spray vaccine. Some children and young adults 2-17 years of age have reported experiencing mild reactions after receiving nasal spray flu vaccine, including runny nose, nasal congestion or cough, chills, tiredness/weakness, sore throat and headache. Some adults 18-49 years of age have reported runny nose or nasal congestion, cough, chills, tiredness/weakness, sore throat and headache. These side effects are mild and short-lasting, especially when compared to symptoms of seasonal flu infection.

What about serious reactions to flu vaccine?

Serious allergic reactions to flu vaccines are very rare. If they do occur, it is usually within a few minutes to a few hours after the vaccination. While these reactions can be life-threatening, effective treatments are available.

What about people who get a seasonal flu vaccine and still get sick with flu-like symptoms?

There are several reasons why someone might get a flu-like illness, even after they have been vaccinated against flu.

1. One reason is that some people can become ill from other respiratory viruses besides flu such as rhinoviruses, which are associated with the common cold, cause symptoms similar to flu, and also spread and cause illness during the flu season. The flu vaccine only protects against influenza viruses, not other viruses.
2. Another explanation is that it is possible to be exposed to influenza viruses, which cause the flu, shortly before getting vaccinated or during the two-week period after vaccination that it takes the body to develop immune protection. This exposure may result in a person becoming ill with flu before protection from the vaccine takes effect.

3. A third reason why some people may experience flu like symptoms despite getting vaccinated is that they may have been exposed to a flu virus that is very different from the viruses the vaccine is designed to protect against. The ability of a flu vaccine to protect a person depends largely on the similarity or “match” between the viruses selected to make the vaccine and those spreading and causing illness. There are many different flu viruses that spread and cause illness among people. For more information, see [Influenza \(Flu\) Viruses \(/flu/about/viruses/index.htm\)](#).
4. The final explanation for experiencing flu-like symptoms after vaccination is that unfortunately, the flu vaccine doesn't always provide adequate protection against the flu. This is more likely to occur among people that have weakened immune systems or people age 65 and older.

Can vaccinating someone twice provide added immunity?

In adults, studies have not demonstrated a benefit of receiving more than one dose during an influenza season, even among elderly persons with weakened immune systems. Except for some children (/flu/protect/children.htm), only one dose of flu vaccine is recommended each season.

Misconceptions about Flu Vaccine Effectiveness

Are there really benefits to getting a flu vaccine?

While how well the flu vaccine works can vary (/flu/about/qa/vaccineeffect.htm), there are a lot of reasons to get a flu vaccine each year.

- Flu vaccination can keep you from getting sick from flu. Protecting yourself from flu also protects the people around you who are more vulnerable to serious flu illness.
- Flu vaccination can help protect people who are at greater risk of getting seriously ill from flu, like older adults, people with chronic health conditions and young children (especially infants younger than 6 months old who are too young to get vaccinated).
- Flu vaccination also may make your illness milder if you do get sick.
- Flu vaccination can reduce the risk of more serious flu outcomes, like hospitalizations and deaths.
 - A recent study* showed that flu vaccine reduced children's risk of flu-related pediatric intensive care unit (PICU) admission by 74% during flu seasons from 2010-2012.
 - One study showed that flu vaccination was associated with a 71% reduction in flu-related hospitalizations among adults of all ages and a 77% reduction among adults 50 years of age and older during the 2011-2012 flu season.
 - Flu vaccination is an important preventive tool for people with chronic health conditions. Vaccination was associated with lower rates of some cardiac events among people with heart disease, especially among those who had had a cardiac event in the past year. Flu vaccination also has been shown to be associated with reduced hospitalizations among people with diabetes (79%) and chronic lung disease (52%).
 - Vaccination helps protect women during pregnancy and their babies for up to 6 months after they are born. One study showed that giving flu vaccine to pregnant women was 92% effective in preventing hospitalization of infants for flu.
 - Other studies have shown that vaccination can reduce the risk of flu-related hospitalizations in older adults. A study that looked at flu vaccine effectiveness over the course of three flu seasons estimated that flu vaccination lowered the risk of hospitalizations by 61% in people 50 years of age and older.

*The [Influenza Vaccine Benefits fact sheet](#)  [\(/flu/pdf/freeresources/general/flu-vaccine-benefits.pdf\)](#) includes references for the information listed above.

Misconceptions about the Timing of Seasonal Influenza Vaccination

Should I wait to get vaccinated so that my immunity lasts through the end of the season?

CDC and the Advisory Committee on Immunization Practices (ACIP) recommend that flu vaccinations begin soon after vaccine becomes available, ideally by October. However, as long as flu viruses are circulating, it is not too late to get vaccinated, even in January or later. While seasonal flu outbreaks can occur as early as October, flu activity most often peaks in January or later. Since it takes about two weeks after vaccination for antibodies to develop in the body that protect against flu virus infection, it is best that people get vaccinated in time to be protected before flu viruses begin spreading in their community. Although immunity obtained from flu vaccination can vary by person, previously published studies suggest that immunity lasts through a full flu season for most people.

There is some evidence, however, that immunity may decline more quickly in older people. For older adults, another flu vaccine option is available called the “high-dose” vaccine, which is designed specifically for people 65 and older. This vaccine contains a higher dose of antigen (the part of the vaccine that prompts the body to make antibody), which is intended to create a stronger immune response in this age group. For more information, see [Fluzone High-Dose Seasonal Influenza Vaccine Questions and Answers \(/flu/protect/vaccine/qa_fluzone.htm\)](/flu/protect/vaccine/qa_fluzone.htm).

The length of time after receiving a vaccine that you are immune or “duration of immunity” is discussed in the [ACIP recommendations](#)

([http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6207a1.htm?](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6207a1.htm?s_cid=rr6207a1_w#RecommendationsUseInfluenzaVaccines201314InfluenzaSeason)

[s_cid=rr6207a1_w#RecommendationsUseInfluenzaVaccines201314InfluenzaSeason](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6207a1.htm?s_cid=rr6207a1_w#RecommendationsUseInfluenzaVaccines201314InfluenzaSeason)). While delaying receipt of vaccine until later in the fall may lead to higher levels of immunity during winter months, the possible benefits of delaying receipt of vaccine must be balanced with problems this may create, such as missed opportunities to receive vaccine and difficulties associated with vaccinating a large number of people within a shorter time period.

Is it too late to get vaccinated after Thanksgiving (or the end of November)?

No. Vaccination can still be beneficial as long as flu viruses are circulating. CDC recommends that providers begin to offer flu vaccination soon after vaccine becomes available in the fall, but if you have not been vaccinated by Thanksgiving (or the end of November), it can still be protective to get vaccinated in December or later. Flu is unpredictable and seasons can vary. Seasonal flu disease usually peaks in January or February most years, but disease can occur as late as May.

Misconceptions about Physician Consent for Vaccination

Do pregnant women or people with pre-existing medical conditions need special permission or written consent from their doctor to receive the flu vaccine?

No. There is no recommendation for [pregnant women \(/flu/protect/vaccine/pregnant.htm\)](/flu/protect/vaccine/pregnant.htm) or people with pre-existing medical conditions to seek special permission or secure written consent from their doctor for vaccination if they get vaccinated at a worksite clinic, pharmacy or other location outside of their physician's office. With rare exception, CDC recommends an annual flu vaccine for everyone 6 months and older, including pregnant women and people with medical conditions.

A variety of influenza vaccine products are available ([Table 1 \(http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6207a1.htm?s_cid=rr6207a1_w#Tab1\)](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6207a1.htm?s_cid=rr6207a1_w#Tab1)), including (as of August 2013) six newly approved vaccines (see [New and Recently Approved Influenza Vaccine Products \(http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6207a1.htm?s_cid=rr6207a1_w#NewRecentlyApprovedInfluenzaVaccineProducts\)](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6207a1.htm?s_cid=rr6207a1_w#NewRecentlyApprovedInfluenzaVaccineProducts)). Vaccine providers should be aware of the approved age indications of the vaccine they are using and of any contraindications or precautions. Providers also should appropriately screen all potential vaccinees for allergies to vaccine components or other contraindications. People who have previously had a severe allergic reaction to influenza vaccine should generally not be vaccinated.

There are some people who should not get a flu vaccine without first speaking with their doctor.

These include:

- People who have a moderate-to-severe illness with or without a fever (they should wait until they recover to get vaccinated), and
- People with a history of [Guillain-Barré Syndrome \(/flu/protect/vaccine/guillainbarre.htm\)](http://flu/protect/vaccine/guillainbarre.htm) (a severe paralytic illness, also called GBS) that occurred after receiving influenza vaccine and who are not at risk for severe illness from influenza should generally not receive vaccine. Tell your doctor if you ever had Guillain-Barré Syndrome. Your doctor will help you decide whether the vaccine is recommended for you.

Pregnant women or people with pre-existing medical conditions who get vaccinated should get the flu shot and not the flu vaccine nasal spray.

If a person is vaccinated by someone other than their primary health care provider, the vaccinating provider should ensure that the patient and, if possible, the patient's medical provider have documentation of vaccination.

For a complete list of people who should not get the vaccine before speaking with their doctor, please review the influenza Vaccine Information Statements for the [flu shot \(http://www.cdc.gov/vaccines/hcp/vis/vis-statements/flu.html#not\)](http://www.cdc.gov/vaccines/hcp/vis/vis-statements/flu.html#not) and the [nasal spray flu vaccine \(http://www.cdc.gov/vaccines/hcp/vis/vis-statements/flulive.html#not\)](http://www.cdc.gov/vaccines/hcp/vis/vis-statements/flulive.html#not).

Misconceptions about “Stomach Flu”

Is the “stomach flu” really the flu?

No. Many people use the term “stomach flu” to describe illnesses with nausea, vomiting or diarrhea. These symptoms can be caused by many different viruses, bacteria or even parasites. While vomiting, diarrhea, and being nauseous or “sick to your stomach” can sometimes be related to the flu — more commonly in children than adults — these problems are rarely the main symptoms of influenza. The flu is a respiratory disease and not a stomach or intestinal disease.

Page last reviewed: November 8, 2013

Page last updated: May 1, 2014

Content source: [Centers for Disease Control and Prevention, National Center for Immunization and Respiratory Diseases \(NCIRD\)](http://www.cdc.gov/ncez)

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